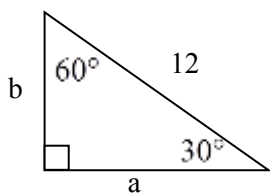
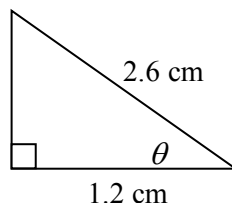
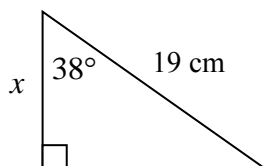


Expectation	Level Achieved
solve problems involving right triangles , using the primary trigonometric ratios and the Pythagorean theorem	

- Evaluate each of the following. (4 decimal places if needed)
 - $\sin 67^\circ$
 - $\cos 54^\circ$
- Find the measure of each angle, to the nearest degree.
 - $\cos \theta = 0.1339$
 - $\tan \theta = 3.4511$
- Solve for a and b.



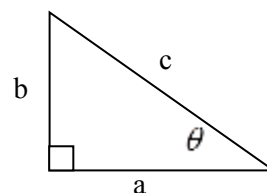
- 4) Solve for each variable.



- 5) From the bottom of the CN Tower (standing at the tip of the shadow), the angle of elevation to the top of the tower is 58° . The shadow is 9.5 m long. How tall is the CN Tower?
- 6) A 10 m ladder leaning against a wall reaches a height of 9 m up the wall. What is the angle of inclination of the ladder? Express your answer to the nearest degree.
- 7) A kite 16 m above the ground and is attached to a 20 m string. What is the angle of elevation to the nearest degree?
- 8) In a right triangle, find the acute angle measure x that will make $\sin x$ equal to $\cos x$. Show the steps of your solution.

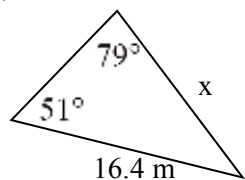
- 9) Two buildings are 54 m apart. From the 15th floor of the shorter building, the angle of elevation to the top of the taller building is 27° . The angle of depression to the base of the taller building is 48° . What is the height of the taller building?

- 10) state $\sin\theta$, $\cos\theta$ and $\tan\theta$ for the following triangle

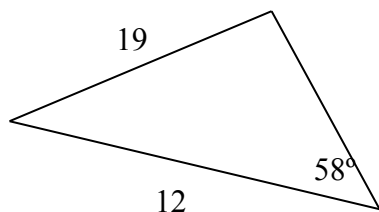


Expectation	Level Achieved
solve problems involving acute triangles, using the sine law and the cosine law	

- 11) Solve for the unknown variable.



- 12) The three sides of a triangle measure 12 cm, 15 cm, and 19 cm. Find the measure of the largest angle, to the nearest degree.
- 13) Consider the lines given by the equations $y = -x + 5$ and $y = x + 12$. Find the angle between these two lines.
- 14) Peter and Mary are 105m apart and there is a tower somewhere between them. Mary's angle of elevation to the top of the tower is 18 degrees, and Peter's is 48 degrees. To the nearest meter, how high is the tower?
- 15) **Solve** the following triangle.
Round all side lengths to the **nearest tenth** and all angles to the **nearest degree**.



- 16) What angle of inclination does the line $y = \frac{1}{2}x - 7$ make with the x -axis?